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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte HANS-KERVIN BRUINS, HEINZ MEHLHORN,  
GUNTER SCHMAHL, and JURGEN SCHMIDT

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Appeal 2011-000117  
Application 10/535,108  
Technology Center 1600

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Before DONALD E. ADAMS, ERIC GRIMES, and  
MELANIE L. McCOLLUM, Administrative Patent Judges.

ADAMS, Administrative Patent Judge.

DECISION ON APPEAL

This appeal under 35 U.S.C. § 134 involves claims 28-40 and 43-45, the only claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

STATEMENT OF THE CASE

The claims are directed to a method of repelling ticks and mites (claims 28-40) and a repellent composition (claims 43-45). Claims 28, 34, and 43 are representative and are reproduced below:

28. A method of repelling ticks and mites comprising applying to a product, area or surface desired to be free of ticks and mites, a repellent composition comprising at least one portion of the plant *Vitex agnus-castus* selected from the group consisting of extracts of said plant, parts of said plant, and combinations thereof.

34. The method of claim 28 wherein the composition further comprises an antioxidant.

43. A repellent composition for repelling ticks and mites, comprising extracts, and/or parts of the plant *Vitex agnus-castus*, and a component selected from the group consisting of N,N-diethyl-m-toluamide[,] dimethyl phthalate, 2-ethyl-hexane-1,3-diol [sic, diol], isopulegol, 1-piperidine carboxylic acid, hydroxyl-ethyl-isobutyl-piperidine-carboxylate, and combinations thereof.

The rejections presented by the Examiner follow:

1. Claims 28, 29, 31-33, 36-41, and 43-45 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Uick,<sup>1</sup> Abivardi,<sup>2</sup> and Beldock.<sup>3</sup>
2. Claims 30, 34, and 35 stand rejected under 35 U.S.C. § 103 as unpatentable over the combination of Uick, Abivardi, Beldock, and Blum.<sup>4</sup>

We affirm.

#### PRINCIPLES OF LAW

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”  
*KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

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<sup>1</sup> Uick, US 5,716,602, issued February 10, 1998.

<sup>2</sup> Cyrus Abivardi, *Iranian Entomology An Introduction Applied Entomology*, Volume 2, 485-523 (Springer 2001).

<sup>3</sup> Beldock et al., US 5,648,398, July 15, 1997.

<sup>4</sup> Blum et al., US 5,885,600, March 23, 1999.

Arguments not made are waived. See 37 C.F.R. § 41.37(c)(1)(vii).  
The combination of Uick, Abivardi, and Beldock:

#### ISSUE

Does the preponderance of evidence on this record support a  
conclusion of obviousness?

#### FACTUAL FINDINGS

FF 1. “The most important synthetic repellent is N,N-diethyl-m-toluamide (DEET), which is contained in many products” (Spec. 2: 32-33).

FF 2. Uick teaches an insect repellent composition comprising DEET (Uick, Abstract; Ans. 4; App. Br. 10).

FF 3. In North America, mosquitoes, ticks, and black flies are the three major groups of arthropods pestiferous to humans (Beldock, col. 1, ll. 19-21). In particular, the Lyme disease ticks have received significant attention in the northeast United States (id. at col. 1, ll. 24-26).

FF 4. “In an attempt to repel insects, people have turned to widely marketed lotions and sprays . . . which contain N,N-diethyl-m-toluamide (DEET) as their active ingredient” (id. at col. 1, ll. 34-37; Ans. 5; App. Br. 10).

FF 5. Abivardi teaches repelling insects by scattering *Vitex agnus castus* leaves in the house (Abivardi 489, ll. 11-14 and 18; Ans. 5; App. Br. 10).

FF 6. Abivardi teaches a composition comprising *Vitex agnus castus* leaves as a repellent against insects and other injurious animals (Abivardi 488, ll. 1 and 12-13; Ans. 5; App. Br. 10).

#### ANALYSIS

Based on the foregoing factual findings (FF 2-6) the Examiner concludes that “[i]t would have been obvious to one of ordinary skill in the

art at the time the claimed invention was made to add the leaves of *Vitex agnus-castus* as an insect repellent to the composition of Uick, as suggested by Abivardi . . . in order to enhance the insect repellency activity of the composition” (Ans. 5; see generally App. Br. 10). We find no error in the Examiner’s *prima facie* case of obviousness.

Appellants contend that Uick “has no relation to the instantly claimed composition as no DEET is present therein” (App. Br. 11). We are not persuaded. A composition within the scope of claim 43 comprises extracts, and/or parts of the plant *Vitex agnus-castus* and N,N-diethyl-m-toluamide. N,N-diethyl-m-toluamide is another name for DEET (FF 1).

We are also not persuaded by Appellants’ contention that DEET has “a very weak effect on ticks” (App. Br. 12). This contention is not supported by factual evidence on this record. To the contrary, Appellants recognize and do not dispute, the Examiner’s evidence of the use of DEET to repel ticks associated with Lyme disease (FF 3-4; Cf. App. Br. 10 (“The Examiner cites Beldock as evidence that DEET is effective against Lyme disease ticks”)). Further, claim 43 does not require the composition to have any particular degree of efficacy. Therefore, a weak effect on ticks is within the scope of claim 43.

Lastly, we are not persuaded by Appellants’ contentions regarding Abivardi (App. Br. 11-13). The Examiner provided a factual basis to support the use of extracts and/or parts of the plant *Vitex agnus-castus* as a repellent against insects and other injurious animals (FF 5-6). A composition within the scope of claim 43 comprises DEET and extracts and/or parts of the plant *Vitex agnus-castus*. The evidence of record supports a conclusion that a DEET composition was known in the art, we

find no error in the Examiner's conclusion that a person of ordinary skill in this art would have found it obvious to add extracts and/or parts of the plant *Vitex agnus-castus* to this DEET composition in order to enhance the insect repellency activity of the composition (see Ans. 5; see generally App. Br. 10). There is no persuasive evidence or argument on this record to support a conclusion that such a composition would not repel ticks and mites.

#### CONCLUSION OF LAW

The preponderance of evidence on this record supports a conclusion of obviousness. The rejection of claim 43 under 35 U.S.C. § 103(a) as unpatentable over the combination of Uick, Abivardi, and Beldock is affirmed. Because they are not separately argued claims 28, 29, 31-33, 36-41, 44, and 45 fall together with claim 43. 37 C.F.R. § 41.37(c)(1)(vii).

The combination of Uick, Abivardi, Beldock, and Blum:

#### ISSUE

Does the preponderance of evidence on this record support a conclusion of obviousness?

#### FINDINGS OF FACT

FF 7. Uick, Abivardi, and Beldock as relied upon as set forth above (FF 2-6; see e.g., Ans. 6).

FF 8. In addition, the Examiner finds that, in addition to DEET, Uick's sunscreen composition comprises "octyl methoxycinnamate, fragrance, emulsifiers, and water which can be applied onto human skin and then rubbed on and spread out over the skin for protection outdoors against annoyance by pests and the harmful effects of UV rays" (Ans. 4).

FF 9. The Examiner finds that the combination of Uick, Abivardi, and Beldock fails to suggest a composition comprising an antioxidant (Ans. 6; App. Br. 14).

FF 10. The Examiner finds that Blum suggest an insect repellant composition that comprises a solvent, UV absorber or stabilizer, and antioxidants which may “be formulated into many different items, such as lotions, sprays, and creams for use on humans, animals and vegetation” (Ans. 7; App. Br. 14).

### ANALYSIS

The method of claim 28 comprises the application of a composition to a product or surface. The composition of claim 28 comprises at least one portion of the plant *Vitex agnus-castus* selected from the group consisting of extracts of said plant, parts of said plant, and combinations thereof; and is open to include other ingredients such as DEET.<sup>5</sup>

Based on the foregoing factual findings the Examiner concludes that it would have been obvious to a person of ordinary skill in this art at the time the invention was made to include an antioxidant, as suggested by Blum, in insect repellant compositions such as those taught by Uick (Ans. 7; App. Br. 14; see also Ans. 9 (“The Examiner has solely relied on the teachings of Blum et al. for the purpose of showing that antioxidants can be added [to] the insect repellant of Uick”)).

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<sup>5</sup> In support of this claim interpretation we direct attention to Appellants’ claim 38 which depends from and further limits claim 28 to further comprise a second repellant compound and claim 39 which depends from and further limits the second repellant compound of claim 38 to a group that includes N,N-diethyl-m-toluamide, otherwise known as DEET (FF 1).

In essence, Appellants contend that “[t]here is no relationship among the extracts of Blum and those instantly claimed” (App. Br. 14) and “[t]he disclosure of Blum is not enabling for a repellant against ticks” (id. at 15). Appellants fail, however, to provide persuasive evidence or argument to support a conclusion that it would not have been prima facie obvious to a person of ordinary skill in this art at the time the invention was made to include an antioxidant, as suggested by Blum, in the composition suggested by the combination of Uick, Abivardi, and Beldock.

#### CONCLUSION OF LAW

The preponderance of evidence on this record supports a conclusion of obviousness. We affirm the rejection of claim 34 under 35 U.S.C. § 103 as unpatentable over the combination of Uick, Abivardi, Beldock, and Blum. Because they are not separately argued claims 30 and 35 fall together with claim 34.

#### TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

#### AFFIRMED

DEA  
EG  
MLM

cdc